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I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to Box Non-Fee Amendment, Commissioner of Patents, Washington, DC 20231.

November 22, 2002
Date

Denise Sheridan
Denise Sheridan

PATENT
RECEIVED
TECHNOLOGY CENTER 2800
SEP - 4 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Timothy B. Cowles et al. Attorney Docket No.: 500792.03
Serial No. : 10/043,680 Group Art Unit : 2824
Filed : January 10, 2002 Examiner : Van Thu T. Nguyen
Title : REFRESH CONTROLLER AND ADDRESS REMAPPING CIRCUIT AND METHOD
FOR DUAL MODE/FULL REDUCED DENSITY DRAMS

Box Non-Fee Amendment
Commissioner of Patents
Washington, DC 20231

AMENDMENT

Sir:

Applicants acknowledge receipt of the Office Action dated September 18, 2002.

In the Claims:

Please cancel claims 13, 29, 38 and 43, and amend claims 11, 27, 36 and 42 as follows:

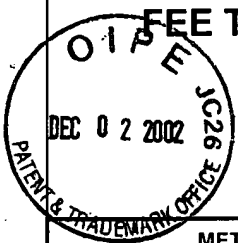
11. (Amended) A refresh controller for use in a dynamic random access memory ("DRAM") having a full density mode and a reduced density mode, the refresh controller comprising:

an oscillator generating a periodic clock signal;

B' a counter having a clock input terminal coupled to receive the clock signal, the counter having first and second stages the first of which increments at a faster rate than the second, the second stage of the being two stages from the first stage of the counter so that the second stage is incremented at one-quarter the rate of the first stage; and

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2824



FEE TRANSMITTAL SHEET (FOR FY 2002)

Complete if Known

Application No.	10/043,680
Filing Date	January 10, 2002
First Named Inventor	Timothy B. Cowles et al.
Group Art Unit	2824
Examiner	Van Thu T. Nguyen
Atty. Docket Number	500792.03

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METHOD OF PAYMENT (Check One)

1. ☒ The Commissioner is hereby authorized to charge any additional fee required under 37 C.F.R. §§ 1.16 and 1.17 and 1.136(a)(3) and credit any over payments to Deposit Account No.: 50-1266; Deposit Account Name: DORSEY & WHITNEY LLP

2. ☐ Check Enclosed

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	740	201	370	<input type="checkbox"/> Utility Filing Fee	
106	330	206	165	<input type="checkbox"/> Design Filing Fee	
108	740	208	370	<input type="checkbox"/> Reissue Filing Fee	
114	160	214	80	<input type="checkbox"/> Provisional Filing Fee	
Subtotal (1)					\$0

2. EXTRA CLAIM FEES

Current Claims	Prior	Extra	Fee	Fee Paid
Total	8	- 20	= 0 x \$ 18	= \$ 0
Ind.	4	- 4	= 0 x \$ 84	= \$ 0
Multiple Dependent Claims			x \$	= \$
Subtotal (2)				\$ 0

Large Entity		Small Entity		Fee Description	
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
103	18	203	9	Claims in excess of 20	
102	84	202	42	Independent claims in excess of 3	
104	280	204	140	Multiple dependent Claim	
109	84	209	42	Reissue independent claims over original patent	
110	18	210	9	Reissue claims in excess of 20 and over original patent	

FEE CALCULATION (Continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
105	130	205	65	Surcharge - Late filing fee or oath	\$
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	\$
139	130	139	130	Non-English specification	\$
147	2,520	147	2,520	For Filing a Request for Reexamination	\$
195	300	196	300	Publication (early or Republication)	\$
115	110	215	55	Extension for reply within first month	\$
116	400	216	200	Extension for reply within 2 nd month	\$
117	920	217	460	Extension for reply within 3 rd month	\$
118	1,440	218	720	Extension for reply within 4 th month	\$
128	1,960	280	980	Extension for reply within 5 th month	\$
120	320	220	160	Filing a brief in support of an appeal	\$
121	280	270	140	Request for oral hearing	\$
148	110	248	55	Terminal Disclaimer Fee	\$
140	110	240	55	Petition to revive - unavoidable	\$
141	1,280	241	640	Petition to revive - unintentional	\$
142	1,280	242	640	Utility/Reissue issue fee (+ advance copies)	\$
143	460	243	230	Design issue fee (+ advance copies)	\$
122	130	122	130	Petitions to the Commissioner	\$
123	50	123	50	Petitions related to provisional applications	\$
126	180	126	180	Submission of IDS	\$
581	40	81	40	Recording each patent assignment per property (times number of properties)	\$
179	740	279	370	Request for Continued Examination (RCE)	\$
Other fee (specify)					\$
Subtotal (3)					\$0
Total Amount of Payment:					\$0

Submitted by:

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Signature: <i>Edward W. Bulchis</i>	Date: Nov. 21, 2002	